MEMORANDUM

To: *Christina Progess, EPA Region 8*
Rebecca Thomas, EPA Region 8

From: *Lynn Woodbury, CDM*
Thomas E. Cook, CDM

Date: *November 15, 2011*

Subject: *Asbestos Water Results Summary for Rainy Creek and Kootenai River*

Surface Water Samples

Surface water samples from Rainy Creek and Kootenai River have been collected under three operable unit (OU) 3-specific sampling and analysis plans (SAPs), including the Phase I SAP (Environmental Protection Agency [EPA] 2007), the Phase II Part A SAP (EPA 2008), and Phase IV Part B SAP (EPA 2010). In addition, Kootenai River samples have been collected under the *Response Action Sampling and Analysis Plan, Revision 2* (United States Army Corps of Engineers [USACE] and CDM Federal Programs Corporation [CDM] 2011). Each of these sampling efforts is discussed in detail below.

Phase I

The objective of the Phase I sampling program (EPA 2007) was to collect surface water data to obtain a preliminary characterization of the nature and extent of potential surface water contamination related to historical mining, milling/processing, and mine-waste disposal operations. **Figure 1** shows a map of all the aquatic sampling locations evaluated in Phase I.

All surface water sampling was conducted by MWH Americas, Inc. (MWH), a contractor to Remedium Group, Inc. Detailed information on the Phase I field sampling effort, including all associated field documentation, is provided in the *Phase I Field Sampling Summary Report* (MWH 2007).

After water samples were collected in the field, the samples for asbestos analysis were hand-delivered to the EMSL Mobile Laboratory in Libby (which is staffed by EMSL Analytical, Inc. [EMSL]) for filtration. The resulting filters were then shipped to EMSL for analysis of total LA by TEM. Filters were prepared and analyzed using EPA Method 100.2 (EPA 1994) in accordance with the modified counting procedures described in Libby Laboratory Modification #LB-000020.

Table 1 presents the surface water asbestos results for sampling locations in upper and lower Rainy Creek from Phase I.

Phase II – Part A

Data from Phase I sampling program provided information on the concentrations of LA in surface water for a single sampling event. Because concentrations of contaminants in surface water may vary over time, especially in cases where there are large fluctuations in flow (e.g., during spring runoff), the objective of the Phase II Part A sampling program (EPA 2008) was to collect additional data to characterize the temporal and spatial patterns of asbestos in surface water at OU3.

The Phase II Part A sampling program consisted of two monitoring efforts – one for the Rainy Creek watershed and one for the Kootenai River. The Rainy Creek watershed monitoring effort was split into several "elements" as follows:

> *Element 1: Seasonal Monitoring* – The purpose of this element was to measure stream flow and contaminant concentrations of LA in surface water at the stations sampled in Phase I to characterize levels during spring and summer flow conditions. Two rounds of sampling were completed – one in June 2008 and one in September 2008.
>
> *Element 2: Spring Runoff Monitoring* – The purpose of this element was to monitor stream flow and surface water LA concentration values at selected stations within the Rainy Creek watershed during the rising and falling limbs of the spring-season snowmelt-runoff hydrograph. Surface water samples were collected weekly at each station beginning at the onset of rising stream flows in response to snowmelt, continuing through the spring high-flow season, and ending after the seasonal peak in flow is observed on Rainy Creek (from early April through mid-June 2008).
>
> *Element 3: Summer and Fall Monitoring* – The purpose of this element was to provide on-going information on asbestos concentrations and stream flow rates downstream of asbestos sources within the Rainy Creek watershed. Two Rainy Creek stations were sampled as part of Element 3 - the station below Carney Creek (LRC-2) and the station near its discharge to the Kootenai River (LRC-6). Surface water samples were collected every two weeks at each station, beginning in mid-June and ending in mid-August 2008.

The Phase II Part A sampling program also collected surface water samples in the Kootenai River. **Figure 2** provides a map of the surface water sampling locations in the Kootenai River. These locations were selected to provide asbestos concentration values upstream and downstream of Rainy Creek and to include river locations with the greatest potential for elevated asbestos concentrations due to transport via Rainy Creek.

All surface water sampling was conducted by MWH. Detailed information on the Phase II Part A field sampling effort, including all associated field documentation, is provided in the *Phase II Field Sampling Summary Report* (MWH 2009).

After water samples were collected in the field, the samples for asbestos analysis were hand-delivered to the EMSL Mobile Laboratory in Libby for filtration. The resulting filters were then shipped to EMSL for analysis of total LA by TEM. Filters were prepared and analyzed in basic accordance with the International Organization for Standardization (ISO) method 10312:1995(E) (ISO 1995) counting protocols, with all applicable Libby site-specific laboratory modifications.

Tables 2.1 to 2.3 present the surface water asbestos results for sampling locations in upper and lower Rainy Creek from Phase II Part A. **Table 2.4** presents the surface water asbestos results for sampling locations in the Kootenai River.

<u>Phase IV – Part B</u>

Because surface water samples collected as part of the Phase I and Phase II sampling investigations may have been influenced by fibers clumping and adhering to sampling container walls, asbestos concentration values observed in these samples are uncertain. The objective of the Phase IV Part B sampling program was to collect additional surface water data to better characterize temporal LA concentrations in surface water at the OU3 site.

The Phase IV Part B sampling program consisted of regular monitoring of LA concentrations in surface water at a subset of sampling locations, including two stations in Rainy Creek (LRC-2 and LRC-6). Weekly sampling was conducted from mid-April to July 2011, followed by bi-weekly sampling through the end of September 2011.

All surface water sampling was conducted by MWH. A detailed field sampling summary report has not yet been prepared.

After water samples were collected in the field, the samples for asbestos analysis were hand-delivered to the EMSL Mobile Laboratory in Libby for filtration. The resulting filters were then shipped to EMSL for analysis of total LA by TEM. Prior to filtration, water samples were treated with ozone/ultraviolet in accordance with the procedures in EPA Method 100.1. Filters analyzed in basic accordance with the ISO 10312:1995(E) (ISO 1995) counting protocols, with all applicable Libby site-specific laboratory modifications.

Table 3 presents the surface water asbestos results for sampling locations in lower Rainy Creek from Phase II Part B.

Response Action Sampling

Between July 15, 2011 and October 28, 2011, EPA contractor CDM) collected a total of 10 water samples from the City of Libby water source pump located at Riverside Park in OU1. The pump draws water from the Kootenai River and, in recent years, has been used as a water source for Libby amphibole asbestos response actions. The 2011 water samples were grab samples collected and analyzed in accordance with the *Response Action Sampling and Analysis Plan, Revision 2* (USACE and CDM 2011). Samples were analyzed for asbestos by TEM using method EPA 100.2 (EPA 1994), with all applicable Libby site-specific laboratory modifications. Analytical results were all non-detect, as presented in **Table 4**.

References

EPA. 1994. Method 100.2: Determination of Asbestos Structures Over 10 um in Length in Drinking Water. U.S. Environmental Protection Agency, Office of Research and Development. June.

_____. 2007. Phase I Sampling and Analysis Plan for Operable Unit 3 Libby Asbestos Superfund Site. U.S. Environmental Protection Agency, Region 8. September 26, 2007.

_____. 2008. Phase II Sampling and Analysis Plan for Operable Unit 3 Libby Asbestos Superfund Site, Part A: Surface Water and Sediment. U.S. Environmental Protection Agency, Region 8. May 29, 2008.

_____. 2011. Phase IV Sampling and Analysis Plan for Operable Unit 3 Libby Asbestos Superfund Site, Part B: 2011 Surface Water Study. U.S. Environmental Protection Agency, Region 8. April 4, 2011.

ISO. 1995. Ambient Air – Determination of asbestos fibres – Direct-transfer transmission electron microscopy method. ISO 10312:1995(E).

MWH. 2007. Field Sampling Summary Report: Phase I Remedial Investigation Operable Unit 3, Libby Asbestos Superfund Site. MWH Americas, Inc. December.

_____. 2009. Field Sampling Summary Report: Phase II Remedial Investigation Operable Unit 3, Part A: Surface Water and Sediment Sampling and Part B: Groundwater and Ambient Air Sampling, Libby Asbestos Superfund Site. MWH Americas, Inc. February.

USACE and CDM. 2011. Response Action Sampling and Analysis Plan, Revision 2, Libby Asbestos Project, Libby, Montana. June.

TABLE 1
PHASE I SURFACE WATER ASBESTOS RESULTS

							Total LA		LA > 10 um in length	
Location	Station ID	Index ID	Analysis Date	GOs Counted	Volume Applied to Filter (mL)	Sensitivity (1/L)	N Structures	Water Conc. (MFL)	N Structures	Water Conc. (MFL)
Upper Rainy Creek	URC-1	P1-00391	3-Dec-07	20	100	5E+04	0	0.0	0	0.0
	URC-2	P1-00390	30-Nov-07	9	100	1E+05	52	5.8	1	0.1
Lower Rainy Creek	LRC-1	P1-00304	11-Dec-07	20	100	5E+04	4	0.2	0	0.0
	LRC-2	P1-00251	5-Dec-07	20	100	5E+04	2	0.1	1	0.0
	LRC-3	P1-00303	11-Dec-07	20	100	5E+04	4	0.2	0	0.0
	LRC-4	P1-00302	4-Dec-07	20	100	5E+04	21	1.0	3	0.1
	LRC-5	P1-00301	4-Dec-07	20	100	5E+04	25	1.2	2	0.1
	LRC-6	P1-00300	11-Dec-07	20	100	5E+04	0	0.0	0	0.0

TABLE 2.1
PHASE II PART A (ELEMENT 1) SURFACE WATER ASBESTOS RESULTS

								Total LA		LA > 10 um in length	
Location	Station ID	Event	Index ID	Sample Date	Volume Applied to Filter (mL)	GOs Counted	Sensitivity 1/L	N Structures	Water Conc. (MFL	N Structures	Water Conc. (MFL
Upper Rainy Creek	URC-1	Round 1	P2-00427	06/27/08	100	20	5.0E+04	0	0.0	0	0.0
		Round 2	P2-00897	09/11/08	100	20	5.0E+04	0	0.0	0	0.0
	URC-1A	Round 1	P2-00422	06/26/08	100	20	5.0E+04	0	0.0	0	0.0
		Round 2	P2-00896	09/11/08	100	20	5.0E+04	0	0.0	0	0.0
	URC-2	Round 1	P2-00421	06/26/08	100	20	5.0E+04	0	0.0	0	0.0
		Round 2	P2-00895	09/11/08	100	20	5.0E+04	2	0.1	0	0.0
Lower Rainy Creek	LRC-1	Round 1	P2-00410	06/25/08	50	40	5.0E+04	0	0.0	0	0.0
		Round 2	P2-00889	09/10/08	100	11	9.1E+04	25	2.3	7	0.6
	LRC-2	Round 1	P2-00451	06/25/08	50	40	5.0E+04	3	0.1	0	0.0
		Round 2	P2-00930	09/09/08	100	20	5.0E+04	7	0.3	3	0.1
	LRC-3	Round 1	P2-00404	06/24/08	50	7	2.8E+05	28	8.0	7	2.0
		Round 2	P2-00885	09/09/08	100	19	5.2E+04	26	1.4	7	0.4
	LRC-4	Round 1	P2-00403	06/24/08	50	8	2.5E+05	27	6.7	3	0.7
		Round 2	P2-00883	09/09/08	100	20	5.0E+04	17	0.8	4	0.2
	LRC-5	Round 1	P2-00402	06/24/08	50	6	3.3E+05	25	8.3	7	2.3
		Round 2	P2-00881	09/09/08	100	20	5.0E+04	12	0.6	1	0.0
	LRC-6	Round 1	P2-00401	06/24/08	50	6	3.3E+05	26	8.6	5	1.7
		Round 2	P2-00880	09/09/08	100	20	5.0E+04	14	0.7	7	0.3

TABLE 2.2
PHASE II PART A (ELEMENT 2) SURFACE WATER ASBESTOS RESULTS

Station ID	Event	Index ID	Sample Date	Volume Applied to Filter (mL)	GOs Counted	Sensitivity 1/L	Total LA		LA > 10 um in length	
							N Structures	Water Conc. (MFL	N Structures	Water Conc. (MFL
URC-1A	Week 1	P2-00010	04/08/08	50	40	5.0E+04	1	0.0	0	0.0
	Week 2	P2-00029	04/14/08	10	50	2.0E+05	0	0.0	0	0.0
	Week 3	P2-00051	04/22/08	100	20	5.0E+04	0	0.0	0	0.0
	Week 4	P2-00069	04/28/08	50	40	5.0E+04	1	0.0	0	0.0
	Week 5	P2-00095	05/06/08	25	50	8.0E+04	0	0.0	0	0.0
	Week 6	P2-00113	05/13/08	100	20	5.0E+04	1	0.0	0	0.0
	Week 7	P2-00312	05/20/08	50	40	5.0E+04	1	0.0	1	0.0
	Week 8	P2-00333	05/27/08	100	20	5.0E+04	0	0.0	0	0.0
	Week 9	P2-00346	06/03/08	100	20	5.0E+04	0	0.0	0	0.0
	Week 10	P2-00361	06/10/08	50	40	5.0E+04	0	0.0	0	0.0
	Week 11	P2-00375	06/17/08	50	50	4.0E+04	0	0.0	0	0.0
URC-2	Week 1	P2-00011	04/08/08	50	40	5.0E+04	12	0.6	3	0.1
	Week 2	P2-00028	04/14/08	5	50	4.0E+05	6	2.4	2	0.8
	Week 3	P2-00050	04/22/08	100	20	5.0E+04	6	0.3	1	0.0
	Week 4	P2-00068	04/28/08	50	40	5.0E+04	4	0.2	0	0.0
	Week 5	P2-00094	05/06/08	50	12	1.7E+05	27	4.5	4	0.7
	Week 6	P2-00111	05/13/08	100	36	2.8E+04	25	0.7	6	0.2
	Week 7	P2-00311	05/20/08	50	40	5.0E+04	6	0.3	2	0.1
	Week 8	P2-00331	05/27/08	100	20	5.0E+04	1	0.0	0	0.0
	Week 9	P2-00345	06/03/08	100	20	5.0E+04	0	0.0	0	0.0
	Week 10	P2-00360	06/10/08	10	3	3.3E+06	38	126.2	2	6.6
	Week 11	P2-00374	06/17/08	100	20	5.0E+04	0	0.0	0	0.0
LRC-1	Week 1	P2-00002	04/07/08	5	32	6.2E+05	50	31.1	12	7.5
	Week 2	P2-00023	04/14/08	30	4	8.3E+05	26	21.6	1	0.8
	Week 3	P2-00044	04/21/08	30	50	6.6E+04	3	0.2	1	0.1
	Week 4	P2-00063	04/28/08	50	12	1.7E+05	25	4.2	1	0.2
	Week 5	P2-00084	05/05/08	50	18	1.1E+05	25	2.8	2	0.2
	Week 6	P2-00105	05/12/08	25	11	3.6E+05	25	9.1	3	1.1
	Week 7	P2-00305	05/19/08	10	10	1.0E+06	28	27.9	4	4.0
	Week 8	P2-00324	05/26/08	25	8	5.0E+05	25	12.5	2	1.0
	Week 9	P2-00338	06/02/08	50	9	2.2E+05	27	6.0	2	0.4
	Week 10	P2-00353	06/09/08	50	40	5.0E+04	13	0.6	0	0.0
	Week 11	P2-00366	06/16/08	25	50	8.0E+04	3	0.2	1	0.1
LRC-2	Week 1	P2-00003	04/07/08	50	13	1.5E+05	50	7.7	7	1.1
	Week 2	P2-00025	04/14/08	30	4	8.3E+05	26	21.6	2	1.7
	Week 3	P2-00042	04/21/08	50	4	5.0E+05	31	15.4	3	1.5
	Week 4	P2-00064	04/28/08	50	8	2.5E+05	27	6.7	4	1.0
	Week 5	P2-00082	05/05/08	50	10	2.0E+05	29	5.8	2	0.4
	Week 6	P2-00103	05/12/08	25	13	3.1E+05	26	8.0	5	1.5
	Week 7	P2-00303	05/19/08	10	50	2.0E+05	9	1.8	2	0.4
	Week 8	P2-00322	05/26/08	25	15	2.7E+05	26	6.9	2	0.5
	Week 9	P2-00336	06/02/08	50	21	9.5E+04	26	2.5	4	0.4
	Week 10	P2-00350	06/09/08	50	31	6.4E+04	27	1.7	7	0.4
	Week 11	P2-00364	06/16/08	25	50	8.0E+04	12	1.0	2	0.2
LRC-6	Week 1	P2-00014	04/08/08	10	50	2.0E+05	5	1.0	2	0.4
	Week 2	P2-00021	04/14/08	10	48	2.1E+05	25	5.2	1	0.2
	Week 3	P2-00041	04/21/08	50	13	1.5E+05	26	4.0	2	0.3
	Week 4	P2-00061	04/28/08	10	34	2.9E+05	26	7.6	2	0.6
	Week 5	P2-00081	05/05/08	50	4	5.0E+05	25	12.5	4	2.0
	Week 6	P2-00101	05/12/08	25	2	2.0E+06	27	53.8	8	15.9
	Week 7	P2-00301	05/19/08	10	4	2.5E+06	34	84.7	11	27.4
	Week 8	P2-00321	05/26/08	25	7	5.7E+05	26	14.8	3	1.7
	Week 9	P2-00335	06/02/08	10	50	2.0E+05	10	2.0	6	1.2
	Week 10	P2-00349	06/09/08	50	5	4.0E+05	27	10.8	6	2.4
	Week 11	P2-00363	06/16/08	25	8	5.0E+05	25	12.5	3	1.5

TABLE 2.3
PHASE II PART A (ELEMENT 3) SURFACE WATER ASBESTOS RESULTS

Station ID	Event	Index ID	Sample Date	Volume Applied to Filter (mL)	GOs Counted	Sensitivity 1/L	Total LA		LA > 10 um in length	
							N Structures	Water Conc. (MFL)	N Structures	Water Conc. (MFL)
LRC-2	1	P2-00459	06/30/08	100	11	9.1E+04	25	2.3	4	0.4
	2	P2-00802	07/15/08	100	13	7.7E+04	25	1.9	7	0.5
	3	P2-00805	07/29/08	100	8	1.2E+05	30	3.7	8	1.0
	4	P2-00807	08/18/08	50	19	1.0E+05	26	2.7	8	0.8
LRC-6	1	P2-00458	06/30/08	100	4	2.5E+05	25	6.2	4	1.0
	2	P2-00800	07/15/08	100	7	1.4E+05	28	4.0	8	1.1
	3	P2-00804	07/29/08	100	20	5.0E+04	17	0.8	5	0.2
	4	P2-00806	08/18/08	100	11	9.1E+04	25	2.3	5	0.5

TABLE 2.4
PHASE II PART A (KOOTENAI RIVER) SURFACE WATER ASBESTOS RESULTS

Station ID	Event	Index ID	Sample Date	Volume Applied to Filter (mL)	GOs Counted	Sensitivity 1/L	Total LA		LA > 10 um in length	
							N Structures	Water Conc. (MFL)	N Structures	Water Conc. (MFL)
UKR	Low Flow	P2-00849	08/19/08	100	20	5.0E+04	0	0.0	0	0
KR-1	Low Flow	P2-00847	08/19/08	100	20	5.0E+04	2	0.10	0	0
KR-2	Low Flow	P2-00846	08/19/08	100	20	5.0E+04	0	0.0	0	0
KR-3	Low Flow	P2-00845	08/19/08	100	20	5.0E+04	0	0.0	0	0
KR-4	Low Flow	P2-00840	08/19/08	100	20	5.0E+04	0	0.0	0	0
KR-5	Low Flow	P2-00841	08/19/08	100	20	5.0E+04	1	0.05	1	0.05
KR-6	Low Flow	P2-00842	08/19/08	100	20	5.0E+04	0	0.0	0	0
KR-7	Low Flow	P2-00843	08/19/08	100	20	5.0E+04	0	0.0	0	0
KR-8	Low Flow	P2-00844	08/19/08	100	20	5.0E+04	0	0.0	0	0

TABLE 3
PHASE IV PART B SURFACE WATER ASBESTOS RESULTS

Sampling Round		Sample Date	LRC-2			LRC-6		
			Index ID	Total LA (MFL)	LA > 10um (MFL)	Index ID	Total LA (MFL)	LA > 10um (MFL)
Weekly Sampling	Round 1	4/19/11	P4-50009	20	2.6	P4-50003	68	13
	Round 2	4/26/11	P4-50022	34	3.0	P4-50013	138	27
	Round 3	5/3/11	P4-50031	92	20	P4-50040	20	1.8
	Round 4	5/10/11	P4-50052	51	9.0	P4-50043	119	27
	Round 5	5/17/11	P4-50064	66	5.3	P4-50061	276	55
	Round 6	5/24/11	P4-50082	41	3.2	P4-50079	130	15
	Round 7	5/31/11	P4-50094	37	1.1	P4-50091	24	1.8
	Round 8	6/7/11	P4-50112	19	2.5	P4-50109	26	2.0
	Round 9	6/14/11	P4-50124	6	0.29	P4-50121	40	5.6
	Round 10	6/28/11	P4-50142	15	2.5	P4-50139	29	2.8
	Round 11	7/5/11	P4-50160	13	2.4	P4-50151	44	6.2
	Round 12	7/12/11	P4-50172	10	1.1	P4-50169	20	3.0
	Round 13	7/19/11	P4-50190	18	2.2	P4-50181	0	0
	Round 14	7/26/11	P4-50202	27	3.2	P4-50199	20	1.2
Bi-weekly Sampling	Round 15	8/9/11	P4-50220	44	7.5	P4-50217	41	4.4
	Round 16	8/23/11	P4-50232	41	5.6	P4-50229	34	2.0
	Round 17	9/6/11	P4-50250	2.7	0.24	P4-50247	20	2.6
	Round 18	9/20/11	P4-50265	9.3	0.65	P4-50259	7.0	0.93

TABLE 4
RESPONSE ACTION WATER SAMPLE RESULTS FOR CITY SOURCE PUMP AT RIVERFRONT PARK

									TEM RESULTS														
									Libby Amphibole					Other Amphibole					Chrysotile				
										All Structures		Structures >10			All Structures		Structures >10			All Structures		Structures >10	
Sample ID	Sample Date	Matrix	Sample Type	Location ID	Sample Location Description	Sample Quantity Applied to Filter (mL)	Analysis Date	Analysis Method	Sens (1/L)	Structure Count	Conc (fibers/L)	Structure Count	Conc (fibers/L)	Sens (1/L)	Structure Count	Conc (fibers/L)	Structure Count	Conc (fibers/L)	Sens (1/L)	Structure Count	Conc (fibers/L)	Structure Count	Conc (fibers/L)
3R-00251	7/15/11	Water	Field Sample	AD-OU3NA	City Source Pump, Kootenai River, Riverside Park	100	7/19/11	TEM EPA 100.2 (LB 20)	166,026	0	<1.7E+05	0	<1.7E+05	166,026	0	<1.7E+05	0	<1.7E+05	166,026	0	<1.7E+05	0	<1.7E+05
3R-00835	8/12/11	Water	Field Sample	AD-OU3NA	City source pump - Kootenai River - Riverfront Park	100	8/16/11	TEM EPA 100.2 (LB 20)	166,026	0	<1.7E+05	0	<1.7E+05	166,026	0	<1.7E+05	0	<1.7E+05	166,026	0	<1.7E+05	0	<1.7E+05
3R-01342	8/18/11	Water	Field Sample	AD-OU3NA	City source pump - Kootenai River - Riverfront Park	100	8/23/11	TEM EPA 100.2 (LB 20)	166,026	0	<1.7E+05	0	<1.7E+05	166,026	0	<1.7E+05	0	<1.7E+05	166,026	0	<1.7E+05	0	<1.7E+05
3R-01479	9/2/11	Water	Field Sample	AD-OU3NA	Riverfront Park, Kootenai River, City source pump	100	9/9/11	TEM EPA 100.2 (LB 20)	166,026	0	<1.7E+05	0	<1.7E+05	166,026	0	<1.7E+05	0	<1.7E+05	166,026	0	<1.7E+05	0	<1.7E+05
3R-01939	10/6/11	Water	Field Sample	AD-OU3NA	City Source pump Kootenai River Riverfront Park	100	10/10/11	TEM EPA 100.2 (LB 20)	166,026	0	<1.7E+05	0	<1.7E+05	166,026	0	<1.7E+05	0	<1.7E+05	166,026	0	<1.7E+05	0	<1.7E+05
3R-02074	9/15/11	Water	Field Sample	AD-OU3NA	AD#000594, Kootenai River, Riverfront Park source pump	100	9/20/11	TEM EPA 100.2 (LB 20)	166,026	0	<1.7E+05	0	<1.7E+05	166,026	0	<1.7E+05	0	<1.7E+05	166,026	0	<1.7E+05	0	<1.7E+05
3R-02240	9/30/11	Water	Field Sample	AD-OU3NA	Kootenai River Source pump Riverfront Park	100	10/7/11	TEM EPA 100.2 (LB 20)	166,026	0	<1.7E+05	0	<1.7E+05	166,026	0	<1.7E+05	0	<1.7E+05	166,026	0	<1.7E+05	0	<1.7E+05
3R-02674	10/14/11	Water	Field Sample	AD-OU3NA	City source pump Kootenia River Riverfront Park	100	10/19/11	TEM EPA 100.2 (LB 20)	166,026	0	<1.7E+05	0	<1.7E+05	166,026	0	<1.7E+05	0	<1.7E+05	166,026	0	<1.7E+05	0	<1.7E+05
3R-02814	10/21/11	Water	Field Sample	AD-OU3NA	City source pump Kootenai River Riverfront Park	100	10/27/11	TEM EPA 100.2 (LB 20)	166,026	0	<1.7E+05	0	<1.7E+05	166,026	0	<1.7E+05	0	<1.7E+05	166,026	0	<1.7E+05	0	<1.7E+05
3R-02935	10/28/11	Water	Field Sample	AD-OU3NA	City Source Pump Kootenai River Riverfront Park	100	11/2/11	TEM EPA 100.2 (LB 20)	166,026	0	<1.7E+05	0	<1.7E+05	166,026	0	<1.7E+05	0	<1.7E+05	166,026	0	<1.7E+05	0	<1.7E+05

Notes:
Sens = sensitivity
L = liter
mL = milliliter
conc = concentration
ID = identification

FIGURE 1
PHASE I SAMPLING LOCATIONS

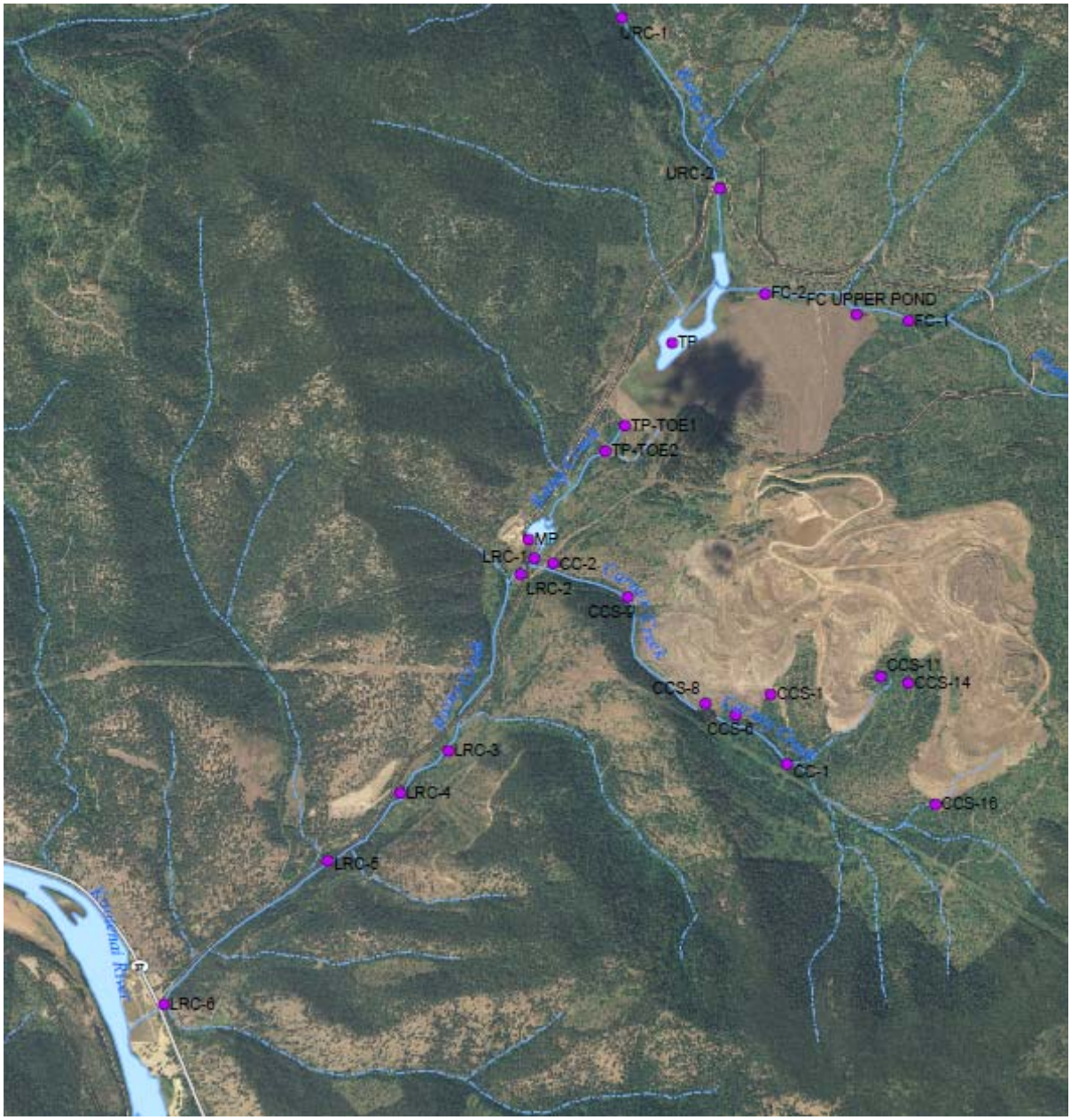

FIGURE 2
KOOTENAI RIVER SAMPLING LOCATIONS (PHASE II PART A)